



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,415	01/28/2004	Kuo Yi-Lung	23724-07791	2851

758 7590 09/26/2006

FENWICK & WEST LLP
SILICON VALLEY CENTER
801 CALIFORNIA STREET
MOUNTAIN VIEW, CA 94041

EXAMINER

HOFFBERG, ROBERT JOSEPH

ART UNIT	PAPER NUMBER
----------	--------------

2835

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/767,415	Applicant(s) YI-LUNG ET AL.	
	Examiner Robert J. Hoffberg	Art Unit 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Response to Arguments

1. Applicant's arguments with respect to claim 1-4 and 7-10 have been considered but are moot in view of the new ground(s) of rejection based on applicant's amended claims.
2. Examiner's objection to drawings is maintained because the drawings must show every feature of the claimed invention.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the electronic components including high-heat components and the low-heat components, CPU and socket must be shown or the feature(s) canceled from the claim(s). (These elements appear to be pictorial shown, but do not have reference numbers that need to be described in the specification). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

Art Unit: 2835

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osborn et al. (US 6,034,870) in view of ATX Specification V2.01 (dated 2/97).

With respect to Claims 1-4, 8 and 10, Osborn et al. teach a computer system comprising: a computer chassis (#12) surrounding at least a main chamber within the computer system; a motherboard (#30) mounted inside the computer chassis and configured to support a plurality of electronic components (see Fig. 4) mounted to the motherboard, the electronic components including high-heat electronic components (#32) and low-heat electronic components (unlabeled components in Fig. 4), the high-heat electronic components generating more heat than the low-heat electronic components, a fan (#36) mechanically coupled to the computer chassis and configured to direct an airflow (#38) through the fan from outside the computer chassis to inside the

main chamber of the computer chassis, the air flow for cooling the electronic components; and a plurality of air outlets (#22 and #24) on the main chamber of the chassis to allow exhaust of heated air from the main chamber to outside the computer chassis, the air outlets located closer to (see Fig. 4) the low-heat electrical components than to the high-heat electrical components, thereby generally directing heated exhaust air out of the chassis near the low-heat electrical components instead of near the high-heat electrical components (claim 1), the fan is mounted on a wall (see Fig. 3) of the computer chassis (claims 2 and 8), the fan is configured to blow air directly towards (see Fig. 3) the CPU from outside the computer chassis (claim 3) and a filter (Fig. 3, #42) mounted in a path of an airflow from the fan, the filter for removing particles from air outside the computer chassis before being blown inside the computer chassis (claims 4 and 10). Osborne et al. fail to teach that the air outlets are located on opposing sides of the computer chassis and a socket for receiving a CPU. ATX specification V2.01, Para. 5.1 teaches that the air outlets ("chassis venting") are closer to the low-heat components ("other components") than to the high-heat components ("processor"). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the computer system of Osborn et al. with the air outlets of ATX Specification V2.01 to strategically locate the air outlets to allow for cooling of other components using the same air flow that cools the processor. It would have been an obvious matter of design choice to locate the air outlets on any sides including opposing sides, since applicant has not disclosed that placing the air vents on opposing sides solves any stated problem or is for any particular purpose and it appears

Art Unit: 2835

that the invention would perform equally well where ever the air outlets are located. Official notice is taken that plugging a CPU into a socket is well known in the art and would be obvious to one skilled in the art at the time of the invention to plug a CPU into a socket (claim 3). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the computer system of Osborn et al. in view of ATX specification V2.01 to facilitate installation of CPU on the motherboard.

With respect to Claims 7 and 9, Osborn et al. teach an apparatus for cooling components on a motherboard of a personal computer, the apparatus comprising: a motherboard (#30) containing a plurality of electronic components (see Fig. 4) that generate heat during operation, a high-heat subset (#32) of the electrical components generating a relatively high amount of heat and a low-heat subset (unlabeled components in Fig. 4) of the electrical components generating a relatively low amount of heat, and a chassis (#12) covering the motherboard and including a plurality of air outlets (#22 and #24), wherein the air outlets are located closer to (see Fig. 4) the low-heat electrical components than to the high-heat electronic components, thereby generally directing heated exhaust air out of the chassis near the low-heat electrical components instead of near the high-heat electrical components, the chassis housing the electronic components in a single, unpartitioned chamber (see Fig. 3); and a fan (#36) mechanically coupled to the chassis and configured to direct an airflow (#38) from outside the chassis directly into the chassis to cool the electronic components on the motherboard (claim 7), and a CPU (#32) mounted on the motherboard, wherein the fan is configured to blow air (see Fig. 3) directly towards the CPU (claim 9). Osborn et al.

fails to teach the air outlets are located at least on opposing sides of the computer chassis. ATX specification V2.01, Para. 5.1 teaches that the air outlets ("chassis venting") are closer to the low-heat subset of electrical components ("other components") than to the high-heat subset of electrical components ("processor"). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the computer system of Osborn et al. with the air outlets of ATX Specification V2.01 to provide strategically locate the air outlets to allow for cooling of other components using the same air flow that cools the processor. It would have been an obvious matter of design choice to locate the air outlets on any sides including opposing sides, since applicant has not disclosed that placing the air vents on opposing sides solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well where ever the air outlets are located.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wyatt et al. (US 6,972,950) teach a motherboard with a high-heat electronic components (a CPU) and low-heat electronic components having an airflow with a fan directly blowing on the CPU, then flowing over low-heat electronic components and exiting through a plurality of air outlets located on opposing sides of the computer chassis. Korinsky et al. (US 6,027,191) teach a computer system having a motherboard with a plurality of different components and an unpartitioned chassis with plurality of air vents on opposing sides and another vent on a third side of the computer chassis.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Hoffberg whose telephone number is (571) 272-2761. The examiner can normally be reached on 8:30 AM - 4:30 PM Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/767,415
Art Unit: 2835

Page 8

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MICHAEL DATSKOVSKIY
PRIMARY EXAMINER

RJH *RNA*

Michael Datskovskiy
09/20/06